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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,998	09/28/2001	Darren J. Cepulis	200302230-1	4844
22879	7590	06/09/2006	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			CHEN, TSE W	
			ART UNIT	PAPER NUMBER
			2116	

DATE MAILED: 06/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/965,998	Applicant(s) CEPULIS ET AL.	
	Examiner Tse Chen	Art Unit 2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3,7,8,17,18,23,24,30 and 31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3,7,8,17,18,23,24,30 and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

It is hereby acknowledged that the following papers have been received and placed of record in the file: Amendment dated May 4, 2006.

Claims 2-3, 7-8, 17-18, 23-24 and 30-31 are presented for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 2-3 and 7-8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. According to Applicant's Remarks dated November 30, 2005, the amended claims are directed to "providing operating system drivers during installation of operating systems" [pp.12-13], but the original specification did not disclose the subject matter of "storing the operating system drivers on a ROM within the computer system" during such installation. As such, said subject matter is considered new and not eligible for prosecution in this application. However, in the interest of compact prosecution, Examiner will take the position that the storing of the operating system drivers on a ROM is done previous to the installation of the operating system in order to apply prior art.

Findings

1. Madden et al., U.S. Patent 6178503, hereinafter Madden, discloses a method of providing operating system drivers [other files] during an operating system installation on a computer system [abstract; col.8, ll.54-59].
2. Madden discloses the method comprising storing a first set of operating system drivers [other files] operable with a first operating system [OS C 110] in a read only memory (ROM) [permanent storage 124; col.5, ll.63-66] of the computer system [col.8, ll.47-59; drivers needed for operating system to run are depicted in col.11, l.18 – col.17, l.5].
3. Madden discloses the method comprising storing a second set of operating system drivers operable with a second operating system [OS D 112] in the ROM [col.8, ll.47-59; drivers needed for operating system to run are depicted in col.11, l.18 – col.17, l.5].
4. Madden discloses the method comprising having only operating system drivers operable with the operating system to be installed available for copying [col.8, ll.54-59; only operating system drivers operable with the operating system to be installed will be accessible in the directory as operating system drivers operable with other operating systems are not copied].
5. Madden discloses the method comprising storing a first floppy image having a first set of operating system drivers operable with a first operating system [OS C 110] [col.8, ll.47-59; the image comprising all the files and structural information depicted in col.11, l.18—col.17, l.5], the first floppy image stored in a read only memory (ROM) [permanent storage 124; col.5, ll.63-66] of the computer system.
6. Madden discloses the method comprising storing a second floppy image having a second set of operating system drivers operable with a second operating system [OS D 112]

[col.8, ll.47-59, the image comprising all the files and structural information depicted in col.11, l.18—col.17, l.5], the second floppy image stored in the ROM [permanent storage 124; col.5, ll.63-66].

7. Madden discloses the method comprising providing one of the first and second floppy images during the operating system installation [col.8, ll.54-59].
8. Madden discloses the advantage of multiple operating systems is to utilize programs or files that operate under a previous operating system version [col.9, ll.15-26].
9. Agnihotri et al., US 6763456, hereinafter Agnihotri, discloses a method comprising identifying the contents residing on a memory [nvram] by a BIOS routine [col.8, ll.29-38; it is well known in the art to show contents that are files where files represent drivers].
10. Agnihotri discloses a computer system wherein the BIOS programs show the contents that reside in the random access memory [nvram] area of an address space [col.8, ll.29-38].
11. Agnihotri discloses the advantage of identifying the contents of a memory is the facilitation of error handling in emergency situations [col.8, ll.29-55].
12. Alcorn et al., U.S. Patent 6106396, hereinafter Alcorn, discloses a method of providing operating system drivers during an operating system installation on a computer system [fig.1; electronic casino gaming system; col.6, ll.14-29] [col.6, ll.24-29; operating system drivers are required in order for operating systems to operate adequately].
13. Alcorn discloses the method comprising storing the operating system drivers on a read only memory (ROM) [14; 50 and 52] within the computer system, the operating system

residing on the ROM as files [col.9, ll.38-44; it is well known in the art that entities such as data, applications and drivers are stored as files for access].

14. Alcorn discloses the method comprising copying at least one of the operating system drivers from a drive [52] of the computer system during the operating system installation by invoking basic input output system (BIOS) routines [col.9, ll.49-56].
15. Alcorn discloses a read only memory (ROM) device [14].
16. Alcorn discloses the ROM device comprising a basic input output system (BIOS) program [col.9, 38-44].
17. Alcorn discloses the ROM device comprising a set of hardware drivers [col.9, 38-44].
18. Alcorn discloses the BIOS program that is adapted to, when executed by a microprocessor [12], make the set of hardware drivers available for copying during installation of an operating system [col.9, ll.49-56].
19. Alcorn discloses a computer system [fig. 1].
20. Alcorn discloses a computer system comprising a CPU [12].
21. Alcorn discloses a computer system comprising an expansion bus [27] coupled to the CPU.
22. Alcorn discloses a computer system comprising a ROM [14] coupled to the expansion bus, wherein the ROM stores BIOS programs.
23. Alcorn discloses the advantage of authenticating a computer system is the assurance of system integrity [col.5, ll.43-57].
24. Wu, US Patent 6401140, discloses a method comprising copying at least one of the operating system drivers from a virtual disk drive [virtual option rom] of the computer

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system during the operating system installation [col.4, ll.12-51; operating system drivers are needed to operate device].

25. Wu discloses the method of copying at least one of the operating system drivers from a virtual disk drive by invoking basic input output system (BIOS) routines [col.4, ll.12-51].
26. Wu discloses the method of copying at least one of the operating system drivers from a virtual disk drive by accessing the operating system drivers residing on a ROM as files stored on the virtual disk drive by the BIOS routines [col.4, ll.12-51; virtual option rom is built with drivers needed to operate device].
27. Wu discloses a BIOS program that makes the set of hardware drivers [drivers needed to operate devices] available for copying during installation of an operating system by providing the hardware drivers on a virtual disk drive [virtual option ROM] [col.4, ll.12-51].
28. Wu discloses a computer system [fig.1] wherein the BIOS programs of the ROM accesses a virtual floppy drive [virtual option rom] whose contents reside in a memory area of the virtual address space [col.4, ll.12-51; contents of virtual drives are stored in virtual address space to facilitate access as if actual drive exists].
29. Wu discloses a computer system [fig.1] wherein the BIOS programs of the ROM accesses a virtual floppy drive [virtual option rom] whose contents reside in the ROM area of the virtual address space [col.4, ll.12-51; contents of virtual drives are stored in virtual address space to facilitate access as if actual drive exists].

30. Wu discloses the advantage of accessing a virtual ROM is the flexibility gained in the booting process [col.2, ll.50-57].
31. Puckette, U.S. Patent 6385721, discloses a method comprising requesting disk services to a disk drive [mass storage device 30] by invoking interrupt 13h BIOS services directed to the disk drive [col.9, ll.37-40].
32. Puckette discloses a method comprising returning a file name for at least one of the operating system drivers by the interrupt 13h BIOS routines as if the operating system drivers resided on the disk drive [col.9, ll.37-40; reading boot record enables the reading of files].
33. Puckette discloses the advantage of Puckette's teaching is the facilitation of determining whether a disk drive can be accessed [col.9, ll.35-45].
34. Angelo et al., US Patent 5974250, hereinafter Angelo, discloses a computer system [fig.2] wherein after installation of the operating system the operating system drivers on the ROM [eprom] are overwritten with a redundant copy of the BIOS [col.1, ll.48-57].
35. Angelo discloses the advantage of Angelo's teachings is the updating and restoring of BIOS while maintaining integrity [col.1, ll.48-57].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 2, 7, 17-18, 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alcorn in view of Wu, Madden and Agnihotri.

In re claims 2 and 7, Alcorn discloses each and every limitation of the claim as set forth in findings 12-14. Alcorn did not discuss a virtual drive or the use of BIOS routines to show contents of a memory. Wu teaches a method comprising copying at least one of the operating system drivers from a virtual disk drive of the computer system during the operating system installation [findings 24-26] in order to increase flexibility in the booting process [finding 30]. Madden teaches a method comprising storing on the ROM two sets of operating system drivers and having only operating system drivers operable with the operating system to be installed available for copying [findings 1-4] in order to utilize programs or files that operate under a previous operating system version [finding 8]. Agnihotri teaches a method comprising showing the contents residing on a memory by a BIOS routine [finding 9] in order to facilitate error handling in emergency situations [finding 11]. It would have been obvious to one of ordinary skill in the art, having the teachings of Alcorn, Wu, Madden and Agnihotri before him at the time the invention was made, to modify the system taught by Alcorn to include the teachings of Wu, Madden and Agnihotri, in order to obtain the method comprising copying at least one of the operating system drivers from a virtual disk drive of the computer system during the operating system installation by invoking BIOS routines, showing the operating system drivers residing on the ROM as files stored on the virtual disk drive by the BIOS routines, and having only operating system drivers operable with the operating system to be installed available for copying from the virtual disk drive by showing only the operating system drivers operable with the operating system to be installed as files stored on the virtual disk drive by the BIOS routines. One of

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ordinary skill in the art would have been motivated to make such a combination as it provides a way to increase flexibility in booting according to different operating system version as required and facilitate error handling in emergency situations.

In re claims 17 and 18, Alcorn, Wu and Agnihotri disclose each and every limitation as discussed above in reference to claim 2 and additionally, in findings 15-18, and 27.

In re claim 23, Alcorn, Wu and Agnihotri disclose each and every limitation as discussed above in reference to claim 2 and additionally, in findings 10, 19-22, and 28. Examiner has taken Official Notice that it is well known in the art to map a virtual floppy drive whose contents reside in the RAM area of the virtual address space in order to facilitate indirect access to local or remote drives. Examiner has taken Official Notice that it is well known in the art to have a RAM whose contents include operating system drivers in order to facilitate access of particular drivers. Alcorn discloses the memory contents that include hardware drivers available for copying during installation of an operating system [col.9, ll.38-60].

In re claim 24, Alcorn, Wu and Agnihotri disclose each and every limitation as discussed above in reference to claim 2 and additionally, in findings 19-22, and 29. Alcorn discloses the ROM [52] that contains operating system drivers necessary to interface an operating system that is being installed on the computer system with hardware [18] of the computer system [col.9, ll.38-60].

Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alcorn, Wu, Madden and Agnihotri, as applied to claims 2 and 7 above, and in further view of Puckette.

In re claims 3 and 8, Alcorn, Wu, Madden and Agnihotri disclose each and every limitation as discussed above in reference to claims 2 and 7. Alcorn, Wu, Madden and Agnihotri did not

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discuss the details of accessing the virtual drive. Puckette teaches a method comprising requesting disk services to a disk drive [findings 31-32] in order to determine whether a disk drive can be accessed [finding 33]. It would have been obvious to one of ordinary skill in the art, having the teachings of Puckette, Alcorn, Wu, Madden and Agnihotri before him at the time the invention was made, to modify the system taught by Alcorn, Wu, Madden and Agnihotri to include the teachings of Puckette, in order to obtain the method comprising the claimed limitations. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to determine whether a disk drive can be accessed.

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alcorn in view of Wu, and Angelo.

In re claim 30, Alcorn discloses each and every limitation of the claim as set forth in findings 19-22. Alcorn did not discuss a virtual drive or a redundant BIOS. Wu teaches a method comprising using a BIOS program for copying at least one of the operating system drivers from a virtual disk drive of the computer system during the operating system installation [findings 24-27, 29] in order to increase flexibility in the booting process [finding 30]. Angelo teaches a computer system wherein after installation of the operating system the operating system drivers on the ROM are overwritten with a redundant copy of the BIOS [finding 34] in order to update and restore a BIOS while maintaining integrity [finding 35]. It would have been obvious to one of ordinary skill in the art, having the teachings of Alcorn, Wu, and Angelo before him at the time the invention was made, to modify the system taught by Alcorn to include the teachings of Wu and Angelo, in order to obtain the computer system wherein the BIOS programs of the ROM implement a virtual disk drive storing at least some of the operating system drivers; wherein

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during installation of an operating system on the computer at least one of the operating system drivers is copied from the virtual disk drive; and wherein after installation of the operating system drivers on the ROM are overwritten with a redundant copy of the BIOS. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to increase flexibility in booting according to different operating system version as required and update and restore a BIOS while maintaining integrity.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alcorn, Wu, and Angelo in view of Madden and Agnihotri.

In re claim 31, Alcorn, Wu, and Angelo disclose each and every limitation as discussed above in reference to claim 30. Alcorn, Wu, and Angelo did not disclose explicitly different sets of operating system drivers. Madden teaches a method comprising storing on the ROM two sets of operating system drivers and having only operating system drivers operable with the operating system to be installed available for copying [findings 1-4] in order to utilize programs or files that operate under a previous operating system version [finding 8]. Agnihotri teaches a method comprising showing the contents residing on a memory by a BIOS routine [finding 9] in order to facilitate error handling in emergency situations [finding 11]. It would have been obvious to one of ordinary skill in the art, having the teachings of Alcorn, Wu, Angelo, Madden and Agnihotri before him at the time the invention was made, to modify the system taught by Alcorn, Wu and Angelo to include the teachings of Madden and Agnihotri, in order to obtain the method wherein the operating system drivers comprise a first set of operating system drivers for use a first operating system and a second set of operating system drivers for a second operating system, and wherein when the BIOS programs implement the virtual disk drive the BIOS programs configure

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the virtual floppy drive to appear to store only the first set of operating system drivers if the first operating system is being installed. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to increase flexibility in booting according to different operating system version as required and facilitate error handling in emergency situations.

Response to Arguments

Applicant's arguments dated May 4, 2006 have been fully considered but they are not persuasive.

Applicant alleges that the position of “installation” that includes “run-time booting of previously installed operating systems” is inconsistent with the specification as supported by paragraph 0035 and figure 5. Firstly, absent of any explicit definition in the disclosure regarding “installation”, Examiner submits that installation of an operating system [or any application] in the broadest interpretation encompasses the copying of appropriate files. Secondly, the cited support of paragraph 0035 and figure 5 does not indicate “installation” that includes “run-time booting of previously installed operating systems” to be inconsistent because the cited support is an embodiment [definition of term should be consistent across all embodiments] that can be interpreted as performing the overwriting action as an option subsequent to the initial installation [analogous to saving a document by either overwriting an existing copy or making a copy under a different name]. Thirdly, Examiner notes Applicant's use of “initial installation” [pg.10 of Remarks dated May 4, 2006] to particularly distinguish the different kinds of installation. As such, Examiner holds that the position of “installation” that includes “run-time booting of previously installed operating systems” is proper and consistent with the specification.

Applicant alleges that the section 112 written description rejection is improper because “none of the pending claims require that the storing of the operating system drivers on the Rom take place during the installation of the operating system”. Examiner disagrees and submits that the claims [e.g., claim 2] states that the “storing the operating system drivers on a ROM within the computer system” is done during an operating system installation [i.e., within the by clause] which Applicant concedes is not disclosed [pg.10 of Remarks dated May 4, 2006].

Applicant alleges that the cited references do not disclose the claim feature “during an operating system installation”. Examiner disagrees and submits that installation of an operating system [or any application] in the broadest interpretation encompasses the copying of appropriate files. In the references, the operating system is clearly being installed [run-time] properly in order to operate accordingly

Applicant alleges that the cited references do not teach “showing different contents of the virtual floppy as a result of installing either the first or second operating system”. Examiner was not able to find such limitations in the claim.

As such, Applicant’s arguments are deemed not persuasive and the rejections are respectfully maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tse Chen whose telephone number is (571) 272-3672. The examiner can normally be reached on Monday - Friday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tse Chen
May 30, 2006


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